



TERM ACOUSTIC SYSTEMS



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Representative Northeast and throughout the national territory

- Sustainable construction
- 18°/20° degree internal temperature -
- 60% faster construction
- 20% savings on your work
- Material waste up to 0007%

Monolithic Panel

Monolithic panel (also called Monolite or just Monolithic) is a building system with a high degree of prefabrication based on the use of panels for walls, slabs and stairs.

Advantages of the Construction System:

Advantage of constructive technology: Monolithic panel, uniform load distribution, dense foundation, sealing and locking panel, seismic resistance, wind and hurricane resistant, easy maneuverability in installation and dynamic, light, excellent flexibility,



allowed to expand by having load distribution before or after construction, thermal, acoustic, does not propagate flames, anti-infiltration panel, panel does not mold, panel does not proliferate fungus.

19 BRAZILIAN NBR.

ABNT NBR 11949 - Apparent Nominal Density

ABNT NBR 12094 - Thermal Conductivity

ABNT NBR 8082 - Compression Stress

ABNT NBR 11948 - Determination of Flammability

ASTM C - 203 - Minimum Bending Strength

ABNT NBR 14081 to 14084 - ACI, ACII and ACIII adhesive mortars.

ABNT NBR 15.220-3. Thermal performance of buildings.

ABNT NBR 15.575-2. Performance of structural systems.

ABNT NBR 10514. Steel networks with double twist hexagonal mesh.



ABNT NBR 15.757-4 Internal and external vertical sealing system.

ABNT NBR 5628. Determination of fire resistance.

ABNT NBR 7213. Lightweight aggregates for thermal insulating concrete.

ABNT NBR 9062. Design and execution of precast concrete structure.

ABNT NBR 8800. Design and execution of steel structure for buildings.

ABNT NBR 9575. Waterproofing. ABNT NBR 10151. Acoustics – Assessment of noise in inhabited areas.

ABNT NBR 10152. Noise levels for acoustic comfort.

ABNT NBR 11752. Cellular polystyrene materials for thermal insulation in civil construction.

ABNT NBR 13528. Wall coating mortar – Determination of tensile adhesion strength.



FN ADENSED FOUNDATION

FN 15 STRENGTHENED: Foundation, Waterproof, Pillars, Masonry. (Ground House).

Density Panel: With 20/22.5 Kg/m³ of 10 cm.

Pope BKT Steel Grating: CA/60 5x5 cm 4.2 gauge.

Minimum Measures: 2.00 Width. 4.00 Height. 10 centimeter thick. Binder: Free adherent with the right dosage for Chapisco/Gross.

FN 15: COMPLETE CONSISTENT (GROUND GROUND)

FD15 STRENGTHENED: Foundation, Waterproof, Pillars, Masonry. (Ground House).

Density Panel: With 20/22.5 Kg/m³ of 10 cm.

BKT Steel Grating: CA/60 4.2 gauge 5x5 cm.

Pieces per mt: 2.00x4.00x10cm.



Binder: Free adherent with the right dosage for Chapisco/Gross. Hydraulic Installation: Tigre Pipes, Gloves, Tee, Knee, Thread Seal, Tigre Glue. Electrical Installation: Corrugated, 2.5 mm wires in two colors, 02 boxes, 02 sockets, 01 switch.

Thickness Coating: Plaster/Render 2/5 cm on each side. Installation Services per m²: Service Included above the amount approved by the industry.

CONSTRUCTION SYSTEM WITH CONSISTENT FOUNDATION:

The Constructive System has three definitions of walls, adapting to your needs, greater safety, speed, energy savings, cost savings in labor in its construction, where the use of material in foundations in general, waterproofing, pillars, beams, bricks, wood.



- FN: (Story house, house kits, container kits, prefab walls, shops).
- G: (Floor house, shed, church, day care, school, hospital, fish pond).
- D: (Building, silo, Industry, sewage containment and major works, retaining wall).

STEP BY STEP DEMONSTRATION OF A STORY BUILDING.

Jig with line!

- Dig the soil, width 30 cm and depth 1.20 cm!
- Compact the bottom of the trench with 20 cm.
- Dividing with 10 cm gravel n° 01 is 10 cm concrete!
- Lower the panel in the valar and alignment!
- (Rigid walls do not come out crooked or without feather).
- Male and female system, each panel has 30 cm of mesh, to be locked in the next wall!
- Lock to walls with struts on the base!



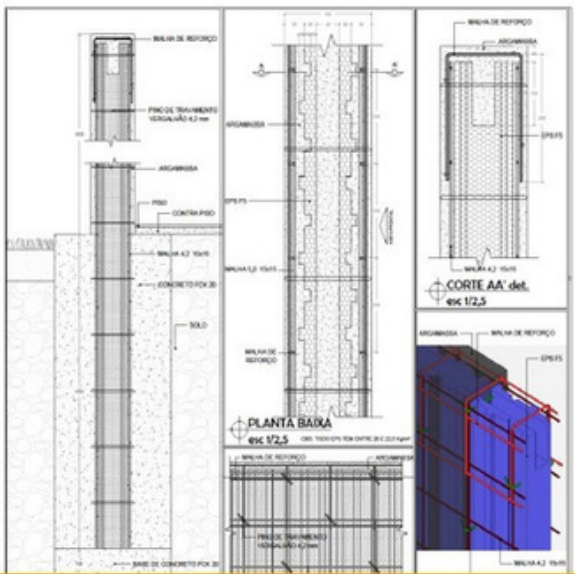
- Internal and external corners! Angle
- shaped "V" inside and outside corners!
- "U" shaped angle bracket for use on doors, windows and openings!
- 45 degree windows anti-crack screen and doors, impact absorption and broken!
- Coverage stuck to the walls! Hydraulic
- and electric, open the juices in hot steam for passages! Mesh and styrofoam cut door or window openings (simple and fast). Opening gaps such as doors and windows, after ready. (Cut with maquita
- the coating)!
- High density roughening and plastering and gluing with 2.5 on each side. (See the project).
- Fixing brackets, normal cabinets. (The brick is hollow, and the cladding is 1 cm thin).
- Crockery and all other normal equipment.



BUILD WITH MONOLITHIC PANEL

- Greater load distribution per square centimeter.
 - Reduction of hardware of various gauges; Box, cage, baldrame, beams and pillar.
 - Reduction of concrete as they dispense with the use of; Box, cage, baldrame, beams and pillar.
 - Exclusion of wood, in the manufacture of formwork in
 - baldrame, pillar and beam. Anti-infiltration, anti-mold, anti-fungus
 - and does not spread flames.
 - Uniform load distribution. System Capable of withstanding
 - earthquakes.
- Minimum board size 2.00x4.00 equal to 8.00 m² installed in 10 minutes.





G20 SEMI- DETACHED

BG20 STRENGTHENED: Foundation, Waterproof, Pillars, Masonry. (Shed Flooring and Walls).

Panel: Density of 20/22.5 Kg/m³ of 14 cm. Pope BKG
Steel Grating: CA/60 5x5 cm 5.0 gauge. Cava or Foot Juice

Right: Lock with 4.2mmx4.2mm truss with 8cmx6cm Will receive post-installation concrete.
Minimum Measures: 3.00 Width. 4.00 Height. 14 centimeter thick.

Binder: Free adherent with the right dosage for Chapisco/Gross.

G20 COMPLETE DETACHED DETACHED

G20 STRENGTHENED: Foundation, Waterproof, Pillars, Masonry. (Sheds and Walls Floors).

Panel: Density of 20/22,5 Kg/m³ of 14 cm: Steel Grade of Pope BKG: Steel CA/60 Gauge of 5.0 of 5x5 cm.

Pieces per mt: 3.00x4.00x14cm. B

Panel: Density with 20/22.5 Kg/m³ of 14 cm: Mesh: CA/60 Gauge of 5.0 of 5x5 cm.

Pieces Minimum Measures: 2.00x4.00x14cm.

Cava or Juice Right Foot: Locking with truss of 4.2mmx4.2mm with 8cmx6cm Will receive post-installation concrete.

Binder: Free adherent with the right dosage for Chapisco/Gross.

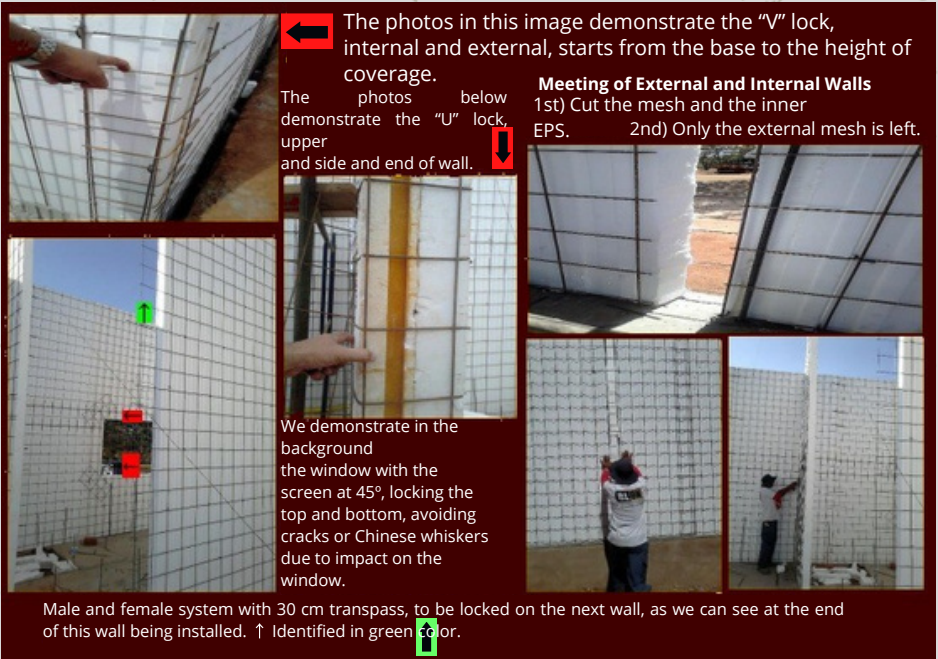
Hydraulic Installation: Tiger Pipes, Gloves, T, Knee, Veda Rosca, Cola Tigre.



Electrical Installation: Corrugated, 2.5 mm wires in two colors, 02 boxes, 02 sockets, 01 switch.

Installation Per m²: Service Included above the amount approved by the industry.

Coating Thickness: 2.0 cm roughcast and 1.00 cm plaster on each side.



D30 DETACHED DETACHED DETACHED:

D30 DENSE: Foundation, Waterproof, Pillars, Masonry. (Buildings, Silos and Industry).

Panel: Density of 20/22.5 Kg/m³ of 20 cm. Pope

BKG Steel Grating: CA/60 5x5 cm 6.0 gauge.

Concrete Fkc 30 Mpa: In the vacuum of the panels with 10 cm, Fkc 30 Mpa, thrown by machine.

Minimum Pieces or Measures: 4.00x5.00x30cm.

Binder: Free adherent with the right dosage for Chapisco/Gross.

D30 COMPLETE DETACHED DETACHED DETACHED:

D30 DENSE: Foundation, Waterproof, Pillars, Masonry. (Buildings, Silos and Industry).

Panel: Density of 20/22.5 Kg/m³ of 20 cm. Panel:

Density of 20/22.5 Kg/m³ with panel in H, with 10 cm on each side and vacuum of 10 cm. Pop BKD

Steel Grid: CA/60 5x5 cm 6.0 gauge.

Minimum Pieces or Measures: 4.00x5.00x30cm.

Concrete Fkc 30 Mpa: In the vacuum of the panels with 10 cm, Fkc 30 Mpa, thrown by machine.

Binder: Adhesive already included in the price of the panels, with the right dosage for Chapisco/Gross.



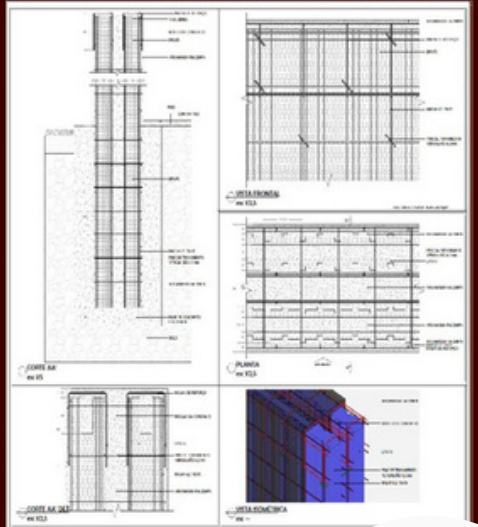
Hydraulic Installation: Tigre Pipes, Gloves, Tee, Knee, Thread Seal, Tigre Glue.

Electrical Installation: Corrugated, 2.5 mm wires, two colors, boxes, 02 sockets, 01 switch. Installation Per m²: Service Included above the amount approved by the industry.

Thickness Coating: 3.00 cm of roughcast/plaster on each side.

D30 SYSTEM!

PLASTER AND PLASTER 3 CM PER SIDE!
10 CM OF CONCRETE IN ITS CORE HIGH STRENGTH!
FOUNDATION DEENSADA BRASIL THE POWER OF CIVIL CONSTRUCTION!



C10 COVER LOCKED.

C10 Coverage: Coverage for wall support (Replacing Wood and Profile).

C10 Coverage: It does not replace the slab, only tilt support function.

Panel Cover: Density of 18/20 Kg/m³ of 10 cm.

Pop Bk7 Steel Grating: CA/60 7x7 cm 4.2 gauge.

Blok Pieces per mt: 3.00x4.00.

Binder for part of the ceiling: Free adhesive with the right dosage for Chapisco/Gross. Electrical

Installation: Corrugated, 2.5 mm wires, two colors, boxes.

C10 PRE-COMPLETE COVERAGE:

Panel Cover: Density of 18/20 Kg/m³ of 10 cm.

Mesh: CA/60 7x7 cm 4.2 gauge.

Pieces per mt: 3.00x4.00; up to 6.00x6.00. Binder: Free adherent with the right dosage for Chapisco/Gross.

PVC tile: locked according to panel size 2.00x4.00; up to 6.00x6.00.

Chapisco: Apply 3 cm thin roughcast on the site, and glue the tile on your choice.

Electrical Installation: Corrugated, 2.5 mm wires, two colors, boxes.

Installation Services per m²: Service Even above the approved amount by the industry.



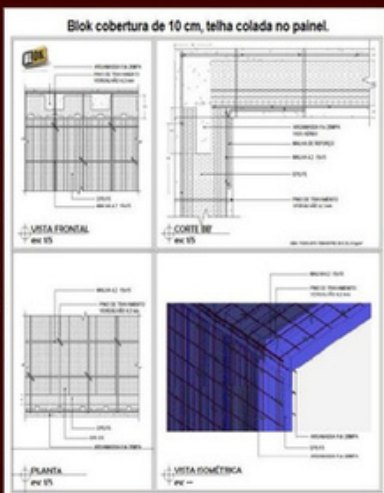
100% SUSTAINABLE ROOFING SYSTEM WANTS WOOD AND PROFILE!



C10 COVERAGE!

MORE RESISTANCE!
MORE DURABILITY!
HIGHER QUALITY!
GREATER SPEED!

FINANCIAL SAVINGS
WITHOUT
WOOD/PROFILE!
THERMAL COMFORT!
LABOR!



FENCE IN PILLARS. BEAMS, FLOOR, SLAB, WOOD PROFILE.

ST15 SEALING: Seal pillars, beams, floor, slab, profile or wood.

Density Panel: With $20/22.5 \text{ Kg/m}^3$ of 10 cm. Steel: CA/60 7x7 cm 4.2 gauge.

Pieces per mt: 2.00x3.00.

Binder: Adherent already included in the price of the panels, with the right dosage for Plaster / Plaster.

Panel Waiting: 4 Iron Bars 3"8 50 cm high, 50 cm apart. Installation Per m^2 : Service Included above of the amount approved by the industry.

Coating Thickness: Chapisco

1/5 cm and 1.00 cm plaster on each side.



ST 15 FULL RESIDENCE AND BUILDING FENCE:

T12 SEALING: Lock on pillars, beams, floor, slab, profile or wood.

Density Panel: With 18/20 Kg/m³ of 8 cm.

Pop BKT steel: CA/60 7x7 cm 4.2 gauge.

Pieces per mt: 2.00x3.00x10cm.

Binder: Adhesive already included in the price of the panels, with the right dosage for Chapisco/Gross.

Panel Waiting: 4 Iron Bars 3"8 for each panel of 2 mt.

Hydraulic Installation: Tiger Pipes, Gloves, T, Knee, Veda Rosca, Cola Tigre.

Electrical Installation: Corrugated, 2.5 mm wires in two colors, 02 boxes, 02 sockets, 01 switch.

Installation Per m²: Service Included above of the amount approved by the industry.

Thickness Coating: 1/5 cm roughcast and 1/5 cm plaster on each side.





ST15 SEALING!

Lightweight and easy to install parts! Floor locks
Locking in Pillars or Slab. Waiting Irons 3"8 of 50 cm.

Distance from one bar to another 50 cm.



Weight without Coating 8 kg/m². Ready weight of 95 kg/m² With 2.00 cm on each side.



WALL WITH UNIFORM LOAD DISTRIBUTION!



I ALSO AGRO TO SERVE THE FIELD MAN.

Thermal Shed. Acoustic. Flameproof. Anti-Infiltration. Anti mold. Anti-Fungus. Profile Pillar waiver. Concrete. beams. Wood.



DIVISIONS :

DIV 7 cm DIVISIONS: Sealing of spans, being locked in pillars, beams and floor.

Density Panel: With 18/20 Kg/m³ of 5 cm. Pop BKF Steel Grating: CA/60 10x10 cm 3.4 gauge.

Pieces per mt: 2.00x3.00.

Binder: Adherent already included in the price of the panels, with the right dosage for Plaster / Plaster.

Hydraulic Installation: Tigre Pipes, Gloves, Tee, Knee, Thread Seal, Tigre Glue.

Electrical Installation: Corrugated, 2.5 mm wires, two colors, 02 boxes, 02 sockets, 01 switch.

Installation Per m²: Service Included above the amount approved by the industry.

Coating Thickness: 1.00 cm roughcast and 1.00 cm plaster on each side.

FT THERMAL LINING:

FT 5 cm THERMAL CEILING: Thermal Ceiling, Beams and Pillars Locking.

Density Panel: With 18/20 Kg/m³ of 7 cm. Pop BKF Steel Grid: CA/60 7x7 cm 3.4 gauge. Blok Pieces

per mt: 2.00x4.00; up to 6.00x6.00. Binder:

Adhesive already included in the price of the panels, with the right dosage for Chapisco/Gross.

Installation Per m²: Service Included above of the amount approved by the industry. Coating

Thickness: Chapisco 1.00 cm and 1.00 cm external plaster.



BR BLOK IN BAR OR SLICED OF 4.8 m³:

BR: Used in the Regularization of the Base/Embankment, Radie containment and Infiltration. Density Panel: With 20/22.50 Kg/m³. Pieces per Block: 1,200x1,000x4,000. 4.8 m³. Installation Per m²: Service Included above the amount approved by the industry.



PRODUCTION OF KITS

Aiming to serve the Federal, State and Municipal Government, within the programs of the MEC/FNDE, Ministry of Health, MCMV and Ministry of Agriculture, bringing greater control of public spending, with inspection, economy, speed of work, consumption of energy, 50-year warranty, and especially with the terror of additives, BLOK towards the Law of bids covers the mayor!

Increasing the profit of construction companies, schedule length, less hospital discharge of employees, with the KITI the loss is 0.0007% in the traditional reaches 47%.



BATHROOMS AND ALL ENVIRONMENTS IN THE HOUSE, SCHOOL NURSERY HEALTH CENTER, HOSPITAL AND CLINICS SHEDS, ACCOMMODATIONS, CONTAINER HOUSES ACCOMMODATION FOR REFUGEES GRAIN SILOS AND FISH TANKS.



ADVANTAGES OF MONOLITHIC PANEL TECHNOLOGY



INSTALLATION SPEED

Countless experiences taken on works in the most varied conditions, in different countries in the world and with the most diverse workers, have shown a substantial reduction in the execution time of constructions made with the System compared to those carried out with traditional systems, thanks to the use of an industrial product that optimizes the assembly sequence, and minimizes the workers' operation.



COST

The Constructive System is more economical when planning and building your building. It also allows you to save energy to cool or heat environments, and reduce cleaning costs as it is easier to maintain.



COMPLETENESS

The System is absolutely versatile and compatible with all current building systems. In addition, productivity can be easily combined with other solutions, such as pre-stressed wooden roofs, or in brick, in order to be combined with the use of plasterboard. The System also meets any type of finish on the market and is adaptable to all types of door or window.



WIDE CHOICE OF FINISHES

The walls made with the System allow any type of coverage, without exception. The finishing level and the application of a coating thickness can be carried out.



VERSATILITY

The System favors the flexibility of the project to be equipped with a complete range of elements of construction: load-bearing walls, partitions, floors and stairs. It is also possible to easily obtain any type of flat or curved geometric shape, working in the gutter with simple cuts of the elements.



LOAD RESISTANCE

Numerous laboratory tests carried out in different parts of the world, as well as in Italy, highlighted the high load resistance. For example, compression tests performed with the load centered on a single finished panel, 270 cm high, last reported a maximum load equal to 1530kN/m.



RESISTANCE TO EXPLOSIONS AND NATURAL DISASTERS

Laboratory tests show that the System offers great resistance to explosions and earthquakes. Its ability to withstand the most devastating cyclones and hurricanes has also been demonstrated, confirming the high resistance of buildings to the complex stresses and pressures of the forces unleashed by these phenomena.



FIRE RESISTANCE

The quality of the expanded polystyrene foam used is self-extinguishing. In addition, the two layers of concrete coating on the sides of the panel prevent it from burning. Tests carried out in different laboratories abundantly satisfy the minimum requirements of the most demanding orders. Example: For a wall made with the PSM80 panel it showed a fire resistance superior to REI 120.



SOUND INSULATOR

Acoustic insulation is one of the System's advantages. Any application for the insertions of the panel absorbent materials (such as cork, coconut fiber, plaster, rock wool, etc.) optimizes the insulating wall intended for stricter compliance with noise.



INSULATES HEAT AND COLD

With a finishing thickness of about 15 centimeters, the System has similar to the thermal insulation of a 40 cm masonry wall. Soon there will be more usable area. This lowers energy costs and increases interior comfort.



LESS WEIGHT AND STRONGER

The panels of the BLOK System are light and at the same time sufficiently rigid, even before completion, extremely manageable.



SUSTAINABILITY AND ENERGY SAVINGS

Improves thermal comfort in homes built with the BLOK System is guaranteed by the widespread presence of polystyrene and by its very low thermal conductivity, which drastically reduces energy consumption and promotes strategies aimed at sustainable development.

Monolithic Panel, with double mesh of CA 60 steel with a diameter of 4.2mm.
In 1M2 we will have 7 steel bars.



Filing of a national patent application

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(22) Deposit Date: 10/03/2016

(43) Publication Date: 02/12/2019 (47)

Grant Date: - -

(51) IPC Rating: E04B 1/88

(52) CPC Classification: E04B 1/88

- (54) Title: THERMAL AND ACOUSTIC WALLS WITH STRUCTURAL FUNCTION MONOLITHIC PANEL (EPS) CONSTRUCTION SYSTEM WITH SOLID WALLS WHICH DOESN'T NEED TRADITIONAL FOUNDATIONS
THERMAL AND ACOUSTIC WALLS WITH STRUCTURAL FUNCTION MONOLITHIC PANEL (EPS) CONSTRUCTION SYSTEM WITH SOLID WALLS WHICH DOESN'T NEED TRADITIONAL FOUNDATIONS. The thermal and acoustic structural panel system was developed to facilitate civil construction, making the workforce simpler, more economical, sustainable and accessible to all social classes, providing efficient insulation for heat conduction and convection, presenting high flexibility and being able to be molded into any shape, low thermal conductivity, good resistance to compression, traction and bending, lightness associated with resistance, excellent behavior in absorbing impacts. In addition to bringing together all these characteristics, EPS has graphite microparticles that absorb and reflect infrared rays, preventing the absorption of heat caused by radiation, thus delaying the conduction, convection and heat radiation processes, resulting in better insulation. and consequently lower consumption of electricity, and space gain by allowing the use of more resistant walls maintaining the same properties and characteristics of EPS.
- (57) Summary



The panel is suitable for walls, partitions, walls, floors and roofs of building and industrial applications as it offers a product with uniform load distribution, dense foundation, sealing panel, seismic resistance, wind and hurricane resistant, of easy maneuverability in the installation, dynamic, light, good flexibility, allowing alteration or expansion during or after the finished work without compromising the structure, giving quality in the construction regarding the structural part, reducing repairs and maintenance, the consumption of electric energy maintaining the ambient temperature with 18°C 22°C degrees, savings in construction between 30% and 45%, in relation to the costs applied on the Federal Government portal and Brazilian civil construction unions: an economy in the speed of construction with up to 60% lower than than the conventional in any type of construction.

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